California Regional Water Quality Control Board
Central Coast Region

Terry Tamminen
Secretary for Environmental Protection

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895 Aerovista Place, Suite 101, San Luis Obispo, California 93401
Phone (805) 549-3147 • FAX (805) 543-0397

Arnold Schwarzenegger
Governor

October 27, 2004

Steven C. Goschke
Plant Manager
Duke Energy Morro Bay, LLC
1290 Embarcadero Rd.
Morro Bay, CA 93442

Dear Mr. Goschke:

DUKE ENERGY MORRO BAY POWER PLANT, SAN LUIS OBISPO COUNTY; TRANSMITTAL OF WASTE DISCHARGE REQUIREMENTS FOR CLASS I WASTEWATER SURFACE IMPOUNDMENTS AND FOR EXEMPTIONS TO THE TOXIC PITS CLEANUP ACT, WASTE DISCHARGE REQUIRMENTS ORDER NO. R3-2004-105

Enclosed please find Waste Discharge Requirements Order No. R3-2004-105 (including Monitoring & Reporting Program No. R3-2004-105) for the Duke Energy Morro Bay Power Plant Class I surface impoundments, adopted by the Board October 22, 2004.

Please direct questions regarding the Order to David Schwartzbart at (805) 542-4643 or dschwart@rb3.swrcb.ca.gov.

Sincerely,

Roger W. Briggs
Executive Officer

Enclosures:
1. Waste Discharge Requirements Order No. R3-2004-105
2. Monitoring and Reporting Program No. R3-2004-105

Cc: Interested Parties List (without enclosures)

S/SLIC/Regulated Sites/San Luis Obispo Co./Morro Bay Power Plant/Duke/Hazardous Waste Ponds, WDR/WDR R3-2004-105 Final Transmittal Letter

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aero Vista Place, Suite 101
San Luis Obispo, California 93401-7906

ORDER NO. R3-2004-105

WASTE DISCHARGE REQUIREMENTS FOR CLASS I WASTEWATER SURFACE IMPOUNDMENTS AND FOR RENEWAL OF EXEMPTIONS TO THE TOXIC PITS CLEANUP ACT

DUKE ENERGY MORRO BAY LLC
MORRO BAY FOSSIL FUELED POWER PLANT
SAN LUIS OBISPO COUNTY

The California Regional Water Quality Control Board, Central Coast Region, (hereafter Board) finds:

1. Duke Energy Morro Bay LLC (hereafter Discharger) owns and operates the Morro Bay Power Plant located on the northern shore of Morro Bay in portions of Sections 25 and 26, T29S, R10E, Mount Diablo Base and Meridian (as shown on Attachments 1 and 2, included as part of this Order). Morro Bay Power Plant, located in San Luis Obispo County, is a fossil fuel burning steam boiler power plant with an electrical generating capacity of 1030 megawatts of electricity. The plant has four steam boiler generator units. Units 1 and 2, completed in 1956, have a capacity of 170 megawatts each. Units 3 and 4, completed in 1963, have a capacity of 345 megawatts each.

2. Duke Energy Morro Bay LLC purchased the Morro Bay Power Plant from Pacific Gas and Electric Company (hereafter Previous Discharger) on July 1, 1998.

3. On January 30, 1998, the Board, at a regularly scheduled public meeting, conditionally amended WDR Order No. 94-105 to reflect ownership transfer of, and TPCA exemption transfer for, the Morro Bay Power Plant, from the Previous Discharger to the Discharger.

4. The Previous Discharger submitted information on February 1, 1988 that completed a Report of Waste Discharge (ROWD) for operation of the surface impoundments at the Morro Bay Power Plant. The Regional Board subsequently issued Waste Discharge Requirements (WDR) Order No. 88-81 on June 10, 1988, regulating operation of the impoundments.

5. In 1985, the Previous Discharger submitted to the United States Environmental Protection Agency Region IX (EPA) and California Department of Health Services (DHS and now the Department of Toxic Substances Control), a Part B Application for four hazardous waste surface impoundments located at Morro Bay Power Plant. The four surface impoundments were the Metal Cleaning Waste Pond, Metal Cleaning Rinse Waste Pond, Low Volume Waste Pond (now called the East, Center and West ponds, respectively) and the Oil Sludge Pond. On the basis of the permit application, EPA and DHS issued Hazardous Waste Facility Permits in June 1988, which was renewed most recently in June 1999. The permits contained operation, inspection, and waste analysis requirements, a contingency plan, closure and post closure plans, and ground water monitoring provisions.

6. In January 1993, the Previous Discharger submitted a revised Part B Permit application for the modification of the Hazardous Waste Facility Permit issued by the California Department of Toxic

Substances Control (DTSC). The permit application was for the continued operations of three hazardous waste surface impoundments: Metal Cleaning Waste Pond, Metal Cleaning Rinse Waste Pond, and Low Volume Waste Pond (now called the East, Center and West Ponds, respectively). The Part B Permit application for the modification of the DTSC permit included a Detection Ground Water Monitoring Program. This program was presented in the "Ground Water Monitoring Plan" dated December, 1992. The Ground Water Monitoring Plan was approved (with revisions required) by the June 30, 1993, DTSC permit. The Ground Water Monitoring Plan was revised several times until the current iteration, and was implemented with the renewal of the current DTSC Hazardous Waste permit on June 30, 1999 (Groundwater Monitoring Plan).

7. On June 30, 1994, the California Department of Toxic Substances Control (DTSC) issued a modified "Hazardous Waste Facility Permit" for the Morro Bay Power Plant (EPA ID# CAT 080011646). The permit has been revised and renewed several times, most recently in June 1999. The permit contains operation, inspection, and waste analysis requirements, contingency, closure and post closure plans and groundwater monitoring provisions for the East, Center and West ponds. According to EPA it was not necessary for EPA to issue a modified permit in 1993, since the State of California had received full authorization of the RCRA program.

8. The Previous Discharger closed the Oil Sludge Pond, which was included in the 1988 permits. The Oil Sludge Pond was part of the oil water treatment system. A closure certification report for the Oil Sludge Pond was submitted and approved by DTSC, EPA and the Board. The groundwater monitoring associated with the Oil Sludge Pond was completed in 1993, with DTSC and Board concurrence.

9. In December 1991, the Previous Discharger submitted a report entitled "Financial Assurance and Monitoring Program." This submittal, revised in November 1992, was a requirement of the revisions to Chapter 15 of Division 3 of Title 23, California Code of Regulations (Chapter 15). The report provided information to show the Previous Discharger was in compliance for the three Class I surface impoundments with financial assurance requirements and to propose the monitoring programs, both as required by Chapter 15, Section 2550.0.

10. The Discharger operates three on-site Class I hazardous waste surface impoundments (as shown on Attachment 2 included as part of this Order) for the treatment and temporary storage of wastes generated during operation of the plant. These surface impoundments provide treatment of wastes prior to discharge to surface waters pursuant to NPDES Permit CA0003743, Order No. 95-28. The Class I surface impoundments are described as follows:

    a) The **East Pond** is constructed of reinforced concrete and lined with three 80-mil high density polyethylene (HDPE) synthetic liners with two leachate detection, collection, and removal systems (LDCRSs) and a ground water detection, collection, and removal system (GDCRS). The MCWP has an estimated capacity of 140,000 gallons.

    b) The **Center Pond** is constructed of reinforced concrete, and has three 80-mil HDPE liners with two LDCRSs and one GDCRS. The MCRWP has an estimated capacity of 340,000 gallons.

    c) The **West Pond** is also known as the Air Preheater/Fireside Wash Pond. The LVWP has an estimated capacity of 410,000 gallons and is constructed of reinforced concrete with three HDPE liners with two LDCRSs and one GDCRS.

11. The hazardous waste surface impoundments identified in Finding No. 10 are subject to Chapter 15 and the

Toxic Pits Cleanup Act of 1984 (TPCA) as administered by the Board. These impoundments are also subject to Title 22, Division 4.5, Chapter 20 of the California Code of Regulations as administered by DTSC.

12. The Discharger inspects the surface impoundments daily and maintains findings in an Operating Record. Annually, after the removal of the majority of the wastes contained in the surface impoundments, the impoundments are inspected for integrity. An annual inspection report is submitted to DTSC and the Board.

13. The Discharger generates wastes during operation and maintenance of the Plant and in emergency situations. These wastes may be classified as non-hazardous, hazardous or restricted hazardous wastes pursuant to California Code of Regulations Title 22, Division 4, Chapter 30 and California Health and Safety Code Division 20, Chapter 6.5, Section 25122.7. Analyses of the wastes discharged to the surface impoundments indicate they may be hazardous wastes or restricted hazardous wastes due to pH or metal concentrations. Characterization of these wastes is included in the Operating Record for the surface impoundments and in the DTSC permit application.

14. The wastes identified in Finding No. 13 above may be treated by sedimentation, pH neutralization and adjustment and metals precipitation. Following a period of settling, the supernatant from the surface impoundment(s) is tested to confirm compliance with the NPDES permit and then discharged to the circulating water system.

15. Metal precipitate sludges accumulated in the surface impoundments are removed at least annually.

16. Soil beneath the site consists of artificial fill and naturally deposited interbedded sands, silts, and clays. The naturally deposited soils are a result of alluvial and bay deposits consisting of both fine to medium grained sands with some gravels and marine clays. Further detailed descriptions of the regional and site specific geology are presented in the Ground Water Monitoring Plan.

17. The ground water table varies in elevation from approximately twelve feet above Mean Sea Level (MSL) at the eastern edge of the power plant to approximately three feet above MSL at the western edge of the plant. Depth to ground water in the vicinity of the three surface impoundments is approximately 10 feet below grade.

18. Regional ground water flow direction in the uppermost aquifer in the vicinity of the surface impoundments is predominantly westerly to southwesterly toward Morro Bay (as shown on Attachment 3 included as part of this Order). During drought conditions in the early 1990s, the ground water flow direction in the vicinity of the surface impoundments rotated to a northwesterly direction. Further detailed descriptions of the regional and site specific hydrology are presented in the Ground Water Monitoring Plan.

19. The Discharger has been conducting ground water monitoring since 1984.

20. The September 8, 1994 Water Quality Control Plan, Central Coastal Basin, (Basin Plan) incorporates State Board plans and policies by reference and contains a strategy for protecting beneficial uses of State waters.

21. Beneficial uses of groundwater in the vicinity (within 1/2 mile) of the surface impoundments include: Agricultural Supply, Domestic Supply and Industrial Supply. This groundwater is a potential source of

drinking water as identified in The Toxic Pits Cleanup Act of 1984 (TPCA).

22. TPCA is codified as California Health and Safety Code, Division 20, Chapter 6.5, Article 9.5, Section 25208, et. seq. TPCA contains prohibitions (in Sections 25208.4 (a) and 25208.4 (c)) against the three impoundments but allows for exemptions (in Sections 25208.4 (b) and 25208.16, respectively) to those prohibitions, provided certain findings are made. The exemptions for the subject surface impoundments were originally granted by WDR Order No. 87-186, adopted December 4, 1987. Upon adoption of WDR Order 88-81 on June 10, 1988, WDR Order No. 87-186 was rescinded and the exemptions were continued by WDR Order No. 88-81. The exemptions were continued by subsequent orders and have been granted by WDR Order No. 99-133 since November 19, 1999.

23. On May 29, 1992, the Previous Discharger submitted a Report of Waste Discharge (ROWD) for renewal of the TPCA exemptions. The ROWD was determined complete and the TPCA exemptions were renewed by Order No. 92-127 on October 9, 1992. On November 18, 1994, Order No 94-105 was adopted, which rescinded Order No. 92-127, renewed its exemptions and contained operational and monitoring requirements. On November 19, 1999, Order No 99-133 was adopted, which rescinded Order No 94-105, renewed its exemptions and continued operational and monitoring requirements.

24. The Discharger submitted a May 4, 2004 ROWD for renewal of the TPCA exemptions and operational and monitoring requirements contained in Order No. 99-133. This Order (No. R3-2004-105) rescinds Order No. 99-133 and renews the TPCA exemptions and operational and monitoring requirements.

25. In renewing the TPCA exemptions for the subject surface impoundments, the Board makes the following findings based on the record in this matter. The Discharger's May 4, 2004, ROWD also certifies the following findings as accurate.

    a. H&S SECTION 25208.4 b 2 A:

       No hazardous waste constituents have migrated from the surface impoundments into the vadose zone or the waters of the state in concentrations that pollute the vadose zone, or pollute, or threaten to pollute, the waters of the state.

    b. H&S SECTION 25208.4 b 2 B:

       Continuing the operation of the surface impoundments does not pose a significant potential of hazardous waste constituents migrating from the surface impoundments into the vadose zone or the waters of the state, thus polluting the vadose zone, or polluting, or threatening to pollute, these waters.

    c. H&S SECTION 25208.16 a 1:

       No extremely hazardous wastes are currently being discharged into the surface impoundments, and

       1. The records of the person applying for an exemption indicate that no extremely hazardous wastes have been discharged into the surface impoundment and

       2. Extremely hazardous wastes are not present in the surface impoundment, in the vadose zone, or in the waters of the state.

d. H&S SECTION 25208.16 a 2:

The surface impoundment is used for the purpose of temporary storage and noncontinuous batch treatment, all hazardous wastes [resulting from discharge of restricted hazardous waste] are removed after each batch treatment within 30 days of discharge [of restricted hazardous waste] into the impoundment, and the surface impoundment is visually inspected prior to each use and tested for integrity at least annually and complies with subdivision (a) of Section 25208.7. Reports of these tests are filed with the regional board.

e. H&S SECTION 25208.16 a 3:

The surface impoundment is in compliance with construction criteria and ground water monitoring requirements of Section 25208.5 and a hydrogeological assessment report has been filed pursuant to Section 25208.8.

26. The Discharger is in substantial compliance with the following regulatory requirements for its TPCA impoundments:

a. Toxic Pits Cleanup Act

i. Liner - TPCA requires a double liner. The surface impoundments are constructed of reinforced concrete and lined with three 80-mil high-density polyethylene (HDPE) synthetic liners.

ii. Leachate Collection and Recovery - TPCA requires a leachate collection and recovery system. The surface impoundments are constructed with two leachate detection, collection, and removal systems.

iii. Groundwater Monitoring - TPCA requires groundwater monitoring to be conducted in accordance with the Federal Resource Conservation and Recovery Act of 1976. A groundwater monitoring program is being conducted in accordance with that Act.

b. Resource Conservation and Recovery Act

i. Liners - The Hazardous and Solid Wastes Amendment of 1984 (Amendment), Section 3004(o), Minimum Technology Requirements, requires double liners and leachate collection and removal systems under hazardous waste surface impoundments. The Amendment provides for alternative designs. The surface impoundments are constructed of reinforced concrete and lined with three 80-mil high density polyethylene synthetic liners with two leachate detection, collection, and removal systems.

ii. Ground Water Monitoring - Section 3004(p) of the Amendment requires groundwater monitoring of the uppermost aquifer be performed at all hazardous waste facilities. A ground water monitoring program for the surface impoundments is being conducted in accordance with that Amendment.

c. Chapter 15

Chapter 15, Section 2510 (b) and (c) allows engineering alternatives, provided such alternatives comply with the intent of the regulations. The Discharger utilized an engineering alternative design to comply with some Chapter 15 requirements identified in this Finding. This alternative design was approved by the Board in 1988 and is described in Finding No. 27 of this Order.

i. Siting - Hazardous waste management units must be immediately underlain by a sufficient thickness of natural geologic materials of low permeability (1×10^{-7} cm/sec) and situated at least five feet above ground water.

ii. Unsaturated Zone Monitoring - Unsaturated zone monitoring is required, when feasible.

iii. Liner - A double liner system is required. One liner is to include two feet of compacted clay or other impermeable material.

iv. Leachate Collection and Removal Systems (LCRS) - An LCRS is required between liners.

v. Groundwater Monitoring - Groundwater monitoring satisfying specific conditions is required.

27. The Discharger used a specific engineering alternative design to comply with some requirements identified in Finding No. 26, above. The alternative liner and leachate collection system consists of three 80-mil thick high-density polyethylene (HDPE) liners alternating with two HDPE high density polyethylene geonet leachate collection and removal systems. A third collection and removal system on the bottom (tertiary) layer prevents encroachment by ground water.

28. Regarding the operation and compliance history of the impoundments:

a. The three surface impoundments identified in Finding No. 10 are occasionally used for temporary storage and non-continuous batch treatment of restricted hazardous wastes. All restricted hazardous wastes have been batch treated or removed within 30 days of discharge to the surface impoundments. This use is covered by the TPCA exemption under Health & Safety Code section 25208.16 as long as the restricted hazardous wastes do not contain specified concentrations of cyanide or PCBs.

b. The three surface impoundments are visually inspected prior to each use and tested for integrity annually.

c. No leachate, indicating leakage in the impoundment liner, has been discovered in the primary or secondary layers of the Leachate Collection and Removal System (LCRS).

d. Liquid, believed to be rainwater and/or ground water, based on pH and specific conductivity tests, has been removed on several occasions from both the Ground Water Detection and Removal System and the Leachate Collection and Removal System.

e. Ground water samples from specific monitoring wells were resampled, reanalyzed and reported as required by previous WDR and other agency hazardous waste permits when exceedances were detected. This occurred in July 1991 for fluoride exceedances and resulted in the Previous

Discharger's submittal of a successful demonstration report, dated December 11, 1991, that concluded the source of the fluoride was not the surface impoundments. A second demonstration report was submitted by the Discharger in January 2003 as a result of slightly elevated ammonia levels observed in 2002 in one of the monitoring wells. The report identified natural groundwater variation and/or a nearby, aging municipal sewer line as the likely cause as no physical evidence of a leak from the triple lined impoundments was ever identified. There have been several other minor statistically significant increases for monitoring parameters such as barium, bromide and iron. In each instance it was demonstrated, to the satisfaction of the Department of Toxic Substances Control, that the increases were natural fluctuations in ground water chemistry and not related to operation of the surface impoundments.

29. These waste discharge requirements are for an existing facility and are exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Sections 15301 and 15302, Chapter 3, Title 14, of the California Code of Regulations.

30. The Discharger posted Public Notice No. R3-2004-105 in the local U. S. Post Office on August 27, 2004 and published Public Notice No. R3-2004-105 in The Tribune, a local newspaper of general circulation, on August 27, 2004 and August 28, 2004. Those public notices notified the public of the Board's intent to consider waste discharge requirements for these discharges on October 22, 2004 in Santa Barbara, CA, notified of the availability of the proposed order and related materials and solicited comments on same. On September 20, 2004, the Board mailed notice to the Discharger and interested agencies and persons of its intent to adopt waste discharge requirements for these discharges and by subsequently providing a copy of the proposed order. The Discharger and interested agencies and persons were provided an opportunity to submit written comments on this proposed order.

31. After consideration of all comments pertaining to the discharge, during a public hearing on October 22, 2004, this order was found consistent with the above findings.

TPCA Exemptions

The Board HEREBY GRANTS to Duke Energy Morro Bay LLC for its Morro Bay Power Plant, Hazardous Waste Surface Impoundments (East, Center and West Ponds), exemptions from the prohibitions specified by California Health and Safety Code Sections 25208.4 (a) and 25208.4 (c). The exemptions are granted pursuant to California Health and Safety Code Sections 25208.4 (b) and 25208.16, respectively.

IT IS HEREBY ORDERED THAT Duke Energy Morro Bay LLC, in order to meet the provisions contained in Division 7 of the California Water Code and Regulations adopted thereunder, and to meet applicable provisions of the Health and Safety Code, shall comply with the following at its Morro Bay Power Plant Class I surface impoundments:

A. PROHIBITIONS

1. The discharge (placement, disposal, or storage) of liquid extremely hazardous wastes or extremely hazardous wastes containing free liquids into surface impoundments is prohibited.

2. The discharge of any wastes from the surface impoundments to ground waters of the State or to the unsaturated zone surrounding the surface impoundments is prohibited.

3. The discharge of any wastes from the surface impoundments to any surface waters of the State is prohibited, unless allowed pursuant to an approved National Pollutant Discharge Elimination System permit.

4. The discharge (placement, disposal, or storage) of any liquid hazardous wastes or hazardous wastes containing free liquids, into surface impoundments, not in compliance with the construction and prescriptive requirements of Chapter 15 of Title 23 and Section 25208.5(a) of the Health and Safety Code (or an approved engineering alternative), is prohibited.

5. The discharge (placement, disposal, or storage) of any restricted hazardous wastes, produced as a result of operations and maintenance of the Power Plant, into a surface impoundment not in compliance with the construction and prescriptive requirements of Chapter 15 of Title 23 and Section 25208.5(a) of the Health and Safety Code, or an approved engineering alternative, is prohibited.

6. The discharge (placement, disposal, or storage) of any restricted hazardous wastes into the surface impoundments, other than for temporary storage and non-continuous batch treatment of wastes identified in Finding 13 of this Order, is prohibited.

7. The discharge (placement, disposal, or storage) of any restricted hazardous wastes containing cyanide wastes or polychlorinated biphenyls, as specified in Section 25122.7 of the Health and Safety Code is prohibited.

8. The discharge (placement, disposal or storage) of wastes as identified in the Findings of this Order outside of the three hazardous waste impoundments as shown on Attachment 3 is prohibited, with the following exceptions:

   a. Discharge through permitted in-line sumps is allowed, and,

   b. Wastestreams permitted for NPDES and /or impoundment discharge may be discharged through the ocean outfall, in compliance with the applicable NPDES permit.

B. SPECIFICATIONS

1. All hazardous waste, resulting from discharge of restricted hazardous waste into an impoundment, shall be removed from the impoundment within 30 days of discharge.

2. Wastes other than those identified in the Findings of this Order and liquid collected in the LCRS and GDCRS shall not be discharged to the surface impoundments.

3. The Discharger shall inspect all leachate and ground water collection and removal systems and respond as specified in Monitoring and Reporting Program No. R3-2004-105.

4. The Discharger shall inspect each surface impoundment as specified in Monitoring and Reporting No. R3-2004-105. Copies of the annual surface impoundment inspection report shall be submitted to the Board.

5. The treatment, placement, disposal or storage of waste shall not create a nuisance or pollution as defined in Section 13050(l) and (m) of the Water Code.

6. Fluids within the impoundment's ground water collection layer shall be removed as they become

pumpable. These fluids shall not contact the bottom (or any portion) of the overlying LCRS.

7. A minimum freeboard of two feet shall be maintained in all surface impoundment exterior containment at all times.

8. Direct pipeline discharge to surface impoundments shall be either equipped with devices or have fail-safe operating procedures to prevent overfilling. Discharges shall be stopped in the event of any containment system failure that causes a threat to water quality.

9. The Discharger shall allow an authorized representative of the Regional Board to:

   a. Enter at reasonable times upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the conditions of this Order; and,

   d. Sample or monitor at reasonable times, for the purposes of assuring compliance or as otherwise authorized by law, any substances or parameters at any location regulated by this Order.

C. WATER QUALITY PROTECTION STANDARDS

Groundwater monitoring procedures and protection standards specified by the current approved Hazardous Waste Facility Permit must be implemented. Those procedures and standards are subject to change as the Hazardous Waste Facility Permit is revised and/or renewed.

The procedures and standards in effect at the time of adoption of these Waste Discharge Requirements (WDR) are specified by the "Ground Water Monitoring Plan", Revision 3, dated June, 1999 (Groundwater Monitoring Plan), included as Volume 2 of the "Hazardous Waste Permit Application", which is implemented by the "Hazardous Waste Facility Permit" dated June 30, 1999. See Attachments 2 and 3 for monitoring well locations and Attachment 5 for sample analytes, both specified by the Groundwater Monitoring Plan.

The following summarizes some groundwater monitoring requirements and standards in effect at the time of WDR R3-2004-105 adoption. Groundwater under the impoundments is monitored by five monitoring wells, one considered a background well and the rest compliance wells. Data from each well are analyzed statistically by a modified X-Bar Control Chart method. Based on background data, an upper control limit was established for each parameter in each monitoring well. Depending on how many nondetects (ND) occurred in the background data set, monitoring event data are compared to practical quantification limits (PQL), maximum background concentrations (MC) and/or upper control limits (UCL) to determine statistically significant increases (SSI). This is depicted by Attachment 4, "Statistical Method Analysis Flowchart". Method A applies to compounds with all NDs in the background data set. Method B applies to compounds with 50% or more, but less than 100% NDs in the background data set. Method C applies to compounds with less than 50% NDs in the background data set. If an SSI is triggered by the method A, B or C analyses, verification retesting is conducted. Attachment 5, "Summary of Statistical Analysis Methodology" depicts parameters, methods and standards at the five monitoring wells. Attachments 4 and 5 are from Section 7 of the Groundwater Monitoring Plan.

D. PROVISIONS

1. Order No. 99-133 , "Waste Discharge Requirements for Class I Wastewater Surface Impoundments And For Renewal of Exemptions To The Toxic Pits Cleanup Act, Duke Energy North America, Morro Bay Fossil Fueled Power Plant, San Luis Obispo County" adopted by the Board November 19, 1999 , is hereby rescinded.

2. Discharger shall comply with "Monitoring and Reporting Program No. R3-2004-105, as specified by the Executive Officer.

3. Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated January, 1984, except Item Nos. A.3., A.4., A.8., A.11., A.17., C.16., D.1., and D.2.

4. The Board shall be notified by telephone within twenty-four (24) hours from the time of discovery of any containment structure failure or detection of migrating contaminant outside the containment system at the regulated surface impoundments. A written account of the incident, the steps taken to remedy the problem, a plan and schedule for resolution of the problem, and a proposal to prevent the problem from recurring shall be submitted to the Board within 15 working days of the discovery, unless granted an extension by the Executive Officer.

5. The Discharger shall apply for renewal of exemptions to Health and Safety Code Sections 25208.4(a) and Section 25208.4(c) for the impoundments every five years, with the next application due February 1, 2009. The renewal application shall include a Report of Waste Discharge, appropriate filing fees, and any additional information required by the Executive Officer.

6. All notifications required by this Order to be made to the Regional Board also shall be made to the California Department of Toxic Substances Control as follows:

   California Environmental Protection Agency
   Department of Toxic Substances Control
   Northern California Permitting and Corrective Action Branch
   8800 Cal Center Drive
   Sacramento, California 95826-3200

7. The Board maintains the right to revoke at any time the exemptions granted by this Order, if it determines that a surface impoundment granted an exemption is polluting or threatening to pollute waters of the State or if hazardous wastes are migrating from a surface impoundment in concentrations which pollute or threaten to pollute these waters.

8. This Order is subject to Board review and updating, as necessary, to comply with current State and Federal laws, regulations, policies, or guidelines. Board review may occur in increments not to exceed five years from the effective date of this Order. This Order is not intended to prevent implementation of more stringent or restrictive requirements by another agency.

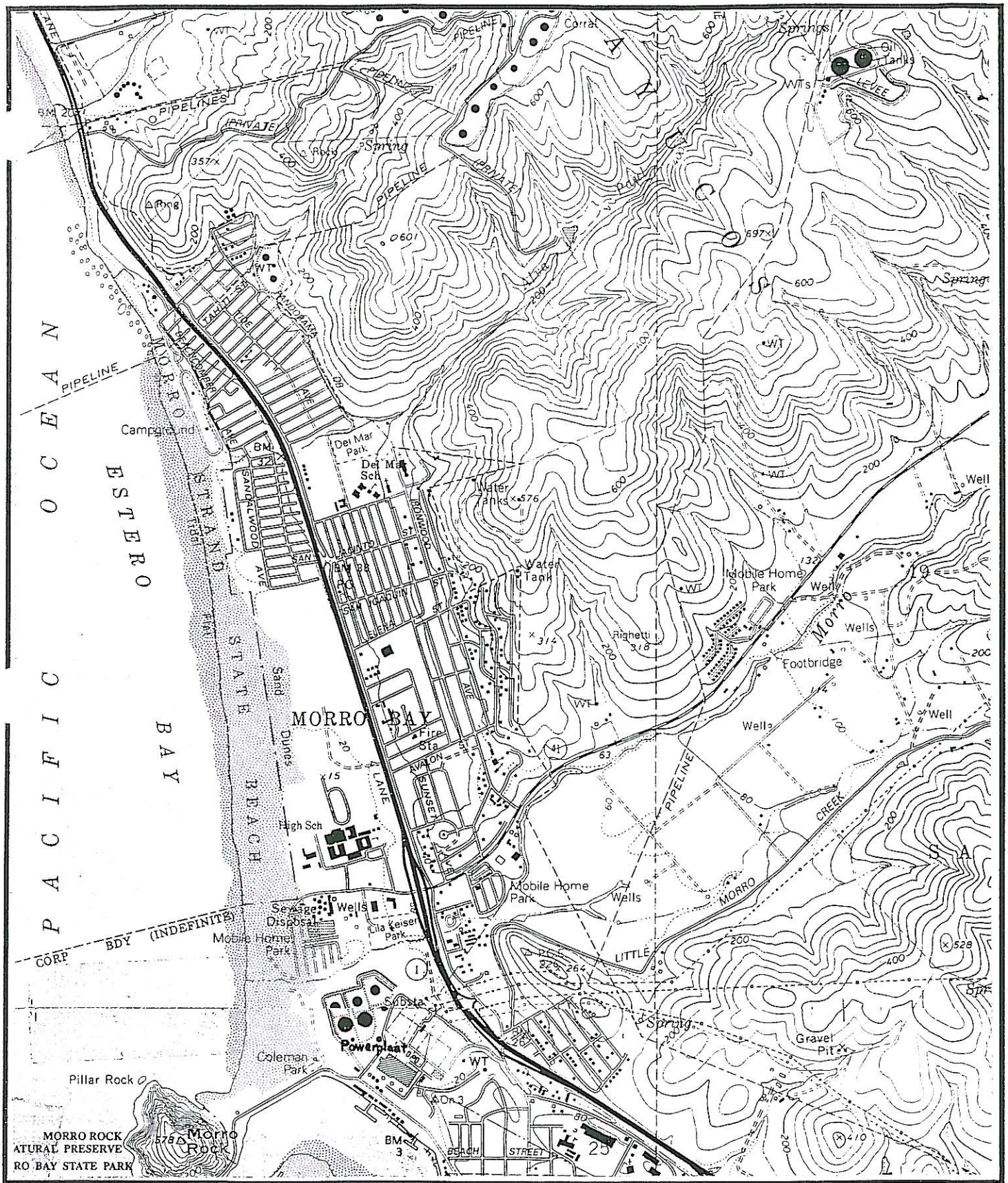
I, **ROGER W. BRIGGS, Executive Officer**, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on October 22, 2004.

Roger W. Briggs
Executive Officer

ATTACHMENTS

1 and 2 Vicinity and Site Maps
3. Groundwater Flow Directions Map
4. Statistical Method Analysis Flowchart
5. Summary of Statistical Analysis Methodology

S/SLIC/Regulated Sites/San Luis Obispo Co./Morro Bay Power Plant/Duke/Hazardous Waste Ponds. WDR/WDR R3-2004-105 draft3



FLUOR DANIEL GTI

SOURCE: U.S.G.S. 7.5' QUAD SHEET
MORRO BAY NORTH, CA
PHOTOREVISED 1993
MORRO BAY SOUTH, CA
PHOTOREVISED 1994

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SCALE: 0 FEET 2000

PHASE II ENVIRONMENTAL SITE ASSESSMENT SITE LOCATION MAP

CLIENT: PACIFIC GAS AND ELECTRIC COMPANY

DATE: 11/26/96

LOCATION: MORRO BAY POWER PLANT
MORRO BAY, CALIFORNIA

Draft WDR Attachment No. 1
October 22, 2004 Meeting
Renewal of WDR's
Order No. R3-2004-0105
Duke Energy MBPP

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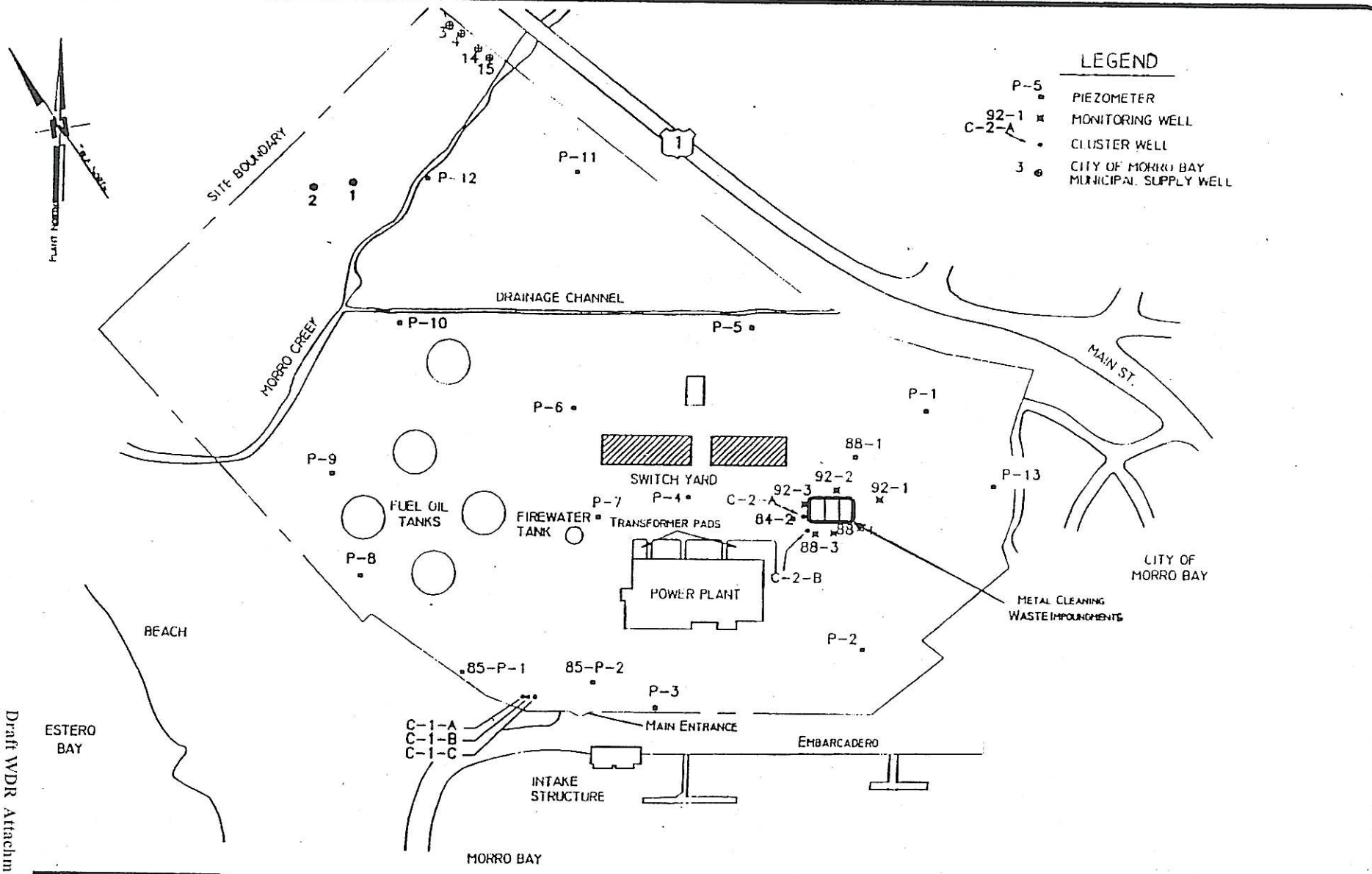
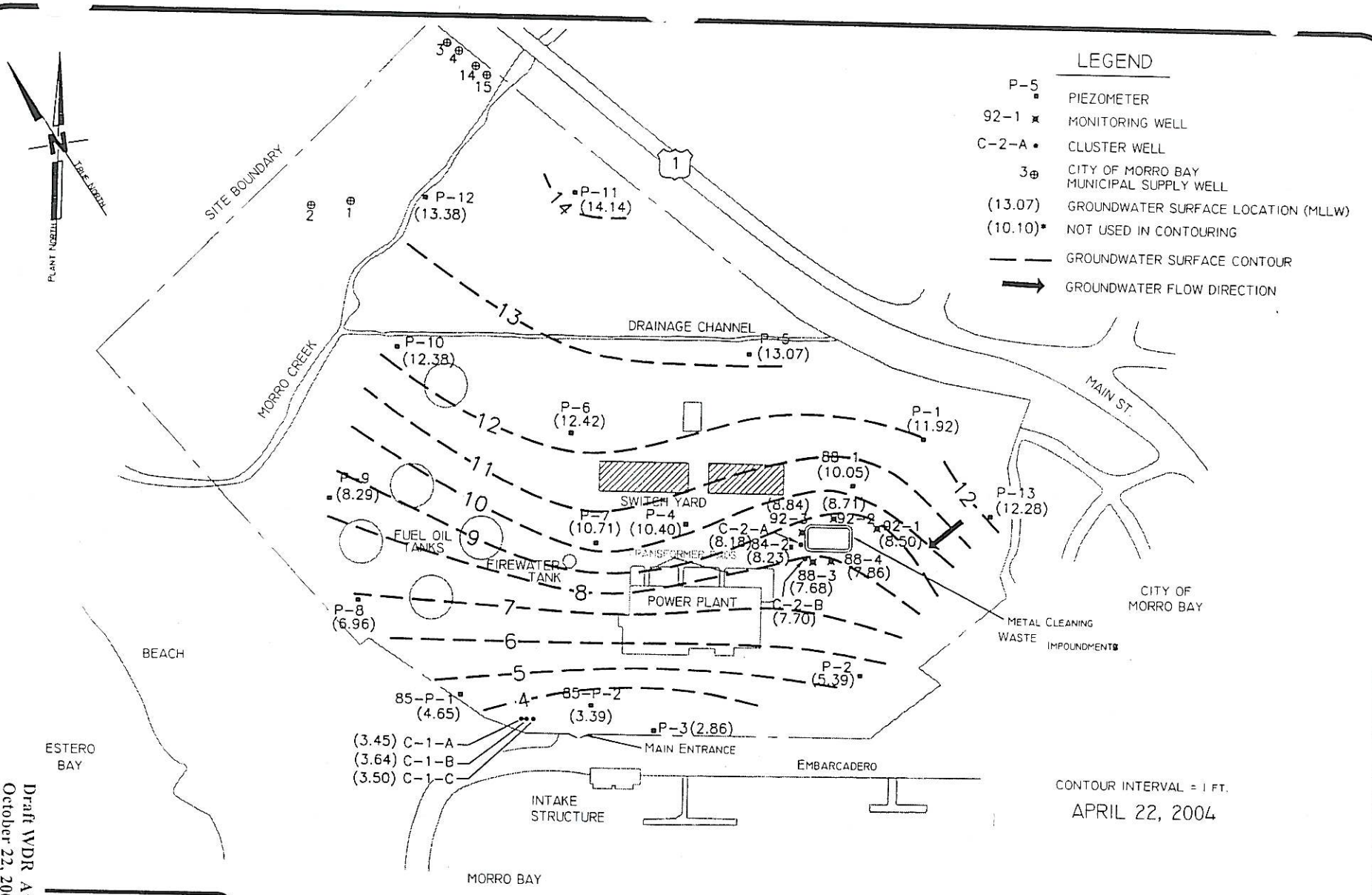


Draft WDR Attachment No. 2
October 22, 2004 Meeting
Renewal of WDR's
Order No. R3-2004-0105
Duke Energy MBPP

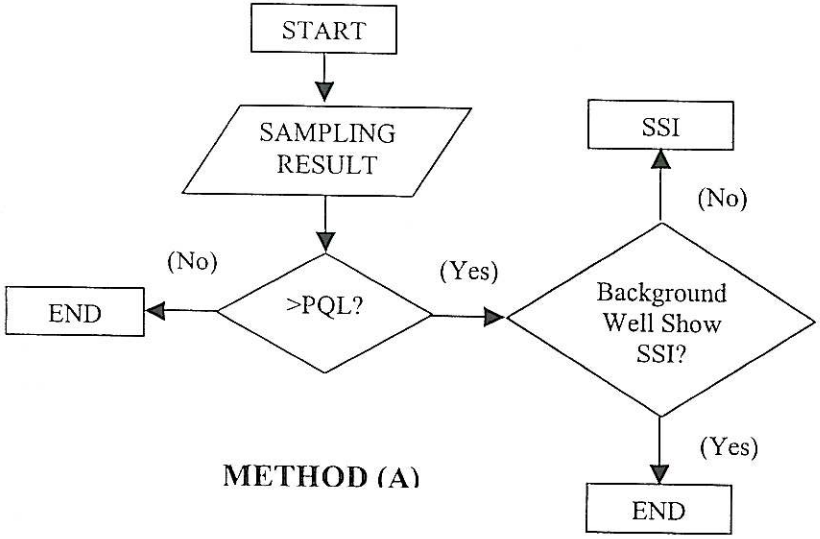


EMCON

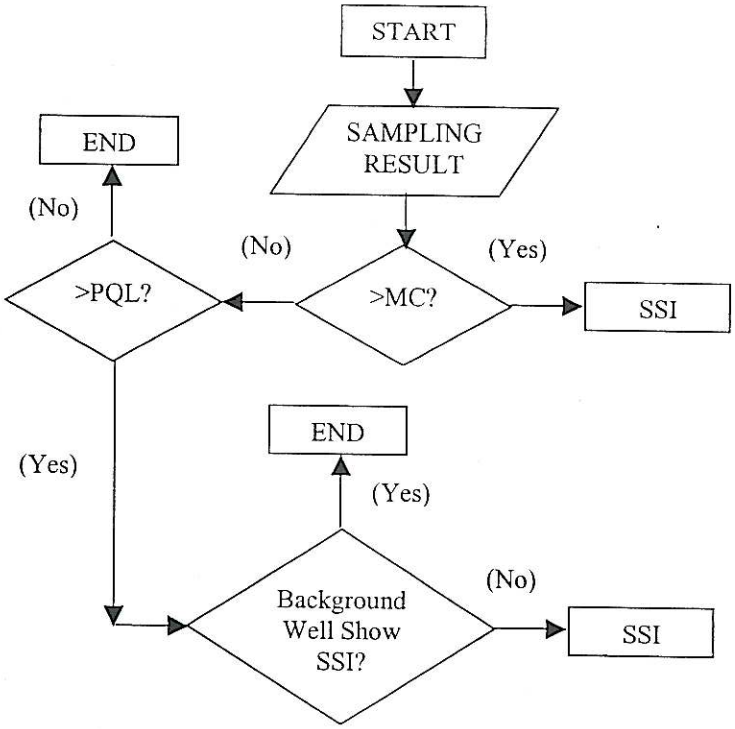
Draft WDR Attachment No. 3
October 22, 2004 Meeting
Renewal of WDR's
Order No. R3-2004-0105
Duke Energy MBPP

GURE 1

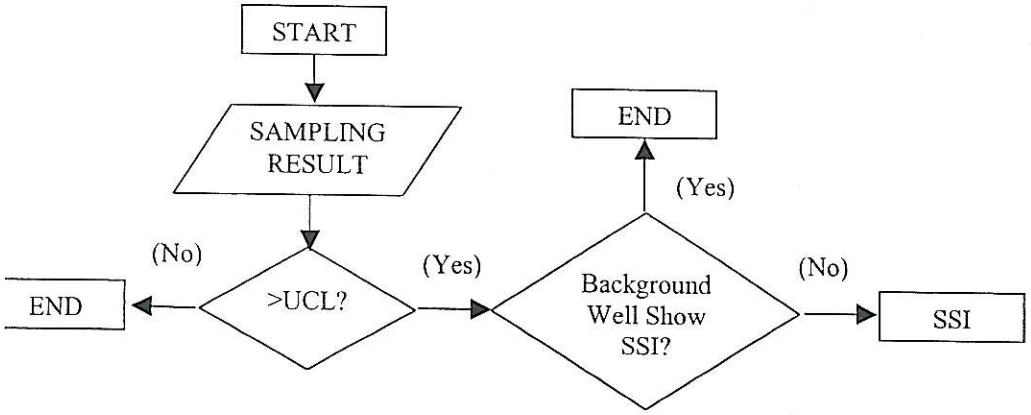
STATISTICAL METHOD ANALYSIS FLOWCHART



METHOD (A)



METHOD (B)



METHOD (C)

NOTES:

SSI = Statistically Significant Increase
PQL = Practical Quantification Limit
MC = Maximum Background Concentration
UCL = X-Bar Control Chart Upper Limit

Table 1
Summary of Statistical Analysis Methodology

Updated June 98
Data Through Oct 97

Parameters	WELL IDENTIFICATION 92-1 Background	92-2 Compliance	92-3 Compliance	88-3 Compliance	88-4 Compliance
MONITORING PARAMETERS (Results in mg/l)					
Bromide	Method (C) PQL=0.1 UCL= 1.57	Method (C) PQL=0.1 UCL= 1.69	Method (C) PQL=0.1 UCL= 1.01	Method (C) PQL=0.1 UCL= 1.53	Method (C) PQL=0.1 UCL= 1.79
Copper	Method (A) PQL=0.025	Method (A) PQL=0.025	Method (B) PQL=0.025 MC= 0.052	Method (A) PQL=0.025	Method (A) PQL=0.025
Fluoride	Method (C) PQL=0.15 UCL= 0.34	Method (C) PQL=0.15 UCL= 0.48	Method (C) PQL=0.15 UCL= 0.49	Method (C) PQL=0.15 UCL= 0.55	Method (C) PQL=0.15 UCL= 0.81
Sulfate	Method (C) PQL=0.059 UCL= 111.7	Method (C) PQL=0.059 UCL= 118.6	Method (C) PQL=0.059 UCL= 144.5	Method (C) PQL=0.059 UCL= 108.8	Method (C) PQL=0.059 UCL= 117.99
Ammonia	Method (B) PQL=0.05 MC= 0.13	Method (C) PQL=0.05 UCL= 0.67	Method (C) PQL=0.05 UCL= 0.83	Method (C) PQL=0.05 UCL= 0.74	Method (C) PQL=0.05 UCL= 0.88
CONSTITUENTS OF CONCERN (Results in mg/l)					
Arsenic	Method (A) PQL=0.01	Method (A) PQL=0.01	Method (A) PQL=0.01	Method (A) PQL=0.01	Method (A) PQL=0.01
Barium	Method (A) PQL=0.2	Method (A) PQL=0.2	Method (A) PQL=0.2	Method (A) PQL=0.2	Method (B) PQL=0.2 MC= 0.21
Chromium (total)	Method (C) PQL=0.01 UCL=0.047	Method (B) PQL= 0.01 MC= 0.015	Method (A) PQL=0.01	Method (B) PQL=0.01 MC= 0.011	Method (A) PQL=0.01
Cobalt	Method (A) PQL=0.05	Method (A) PQL=0.05	Method (A) PQL=0.05	Method (A) PQL=0.05	Method (A) PQL=0.05
Iron	Method (B) PQL=0.1 MC= 0.12	Method (C) PQL=0.1 UCL= 2.84	Method (C) PQL=0.1 UCL= 0.58	Method (C) PQL=0.1 UCL= 0.41	Method (C) PQL=0.1 UCL= 0.31
Magnesium	Method (C) PQL=2.0 UCL= 80.36	Method (C) PQL=2.0 UCL= 183.6	Method (C) PQL=2.0 UCL= 103.3	Method (C) PQL=2.0 UCL= 143.9	Method (C) PQL=2.0 UCL= 149.09
Nickel	Method (B) MC= 0.042	Method (A) PQL=0.04	Method (A) PQL=0.04	Method (A) PQL=0.04	Method (A) PQL=0.04
Vanadium	Method (A) PQL=0.05	Method (A) PQL=0.05	Method (A) PQL=0.05	Method (A) PQL=0.05	Method (A) PQL=0.05
Zinc	Method (B) MC= 0.025	Method (A) PQL=0.02	Method (A) PQL=0.02	Method (A) PQL=0.02	Method (A) PQL=0.02